AMENDMENTS TO THE CLAIMS

1. **(Original)** A method for determining a bipolar affective disorder or a predisposition to a bipolar affective disorder, said method comprising detecting a marker that is linked to map position 4q35.2 of the human genome in a sample derived from a subject, wherein the detection is indicative of a bipolar affective disorder or a predisposition to a bipolar affective disorder in the subject.

2. **(Cancelled)**

3. **(Original)** The method according to claim 1 wherein the marker linked to map position 4q35.2 is located within or comprises the FAT gene.

4. **(Currently amended)** A method for determining a bipolar affective disorder or a predisposition to a bipolar affective disorder, said method comprising detecting a marker within a FAT gene or an expression product thereof that is associated with a bipolar affective disorder in a sample derived from a subject, wherein a presence of the marker is indicative of a bipolar affective disorder or a predisposition to a bipolar affective disorder in the subject and wherein the FAT gene comprises a nucleotide sequence selected from the group consisting of:

   (i)   a nucleotide sequence at least 80% identical to the nucleotide sequence set forth in SEQ ID NO: 1;

   (ii)   a nucleotide sequence that encodes a mRNA at least 80% identical to the nucleotide sequence set forth in SEQ ID NO: 2 or 4; and

   (iii)   a nucleotide sequence that encodes a polypeptide comprising an amino acid sequence at least 80% identical to the amino acid sequence set forth in SEQ ID NO: 3 or 5.

5. **(Cancelled)**

6. **(Currently amended)** The method according to claim 4 wherein the marker is located within the 3' region of the FAT gene that comprises a nucleotide sequence corresponding to the region spanning from nucleotide position 139,260 to nucleotide position 170,001 of SEQ ID NO: 1.

7. **(Cancelled)**

8. **(Cancelled)**

9. **(Cancelled)**

10. **(Cancelled)**

11.   **(Cancelled)**

12.   **(Cancelled)**

13.   **(Currently amended)** The method according to claim 4~~12~~ wherein the <u>marker comprises</u> ~~polymorphism is~~ a single nucleotide polymorphism (SNP).

14.   **(Cancelled)**

15.   **(Cancelled)**

16.   **(Cancelled)**

17.   **(Cancelled)**

18.   **(Original)** The method according to claim 4 wherein the marker comprises a nucleic acid comprising a nucleotide sequence at least about 80% identical to at least about 20 contiguous nucleotides in a sequence selected from the group consisting of:

> (i)   a sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2 and SEQ ID NO: 4;

> (ii)   a sequence capable of encoding a polypeptide comprising an amino acid sequence at least 80% homologous to the sequence set forth in SEQ ID NO: 3 and SEQ ID NO: 5; and

> (iii)   a sequence complementary to a sequence set forth in (i) or (ii).

19.   **(Currently amended)** The method according to claim 4 wherein the marker is detected by <u>hybridizing</u> ~~hybridising~~ a nucleic acid probe or primer comprising the sequence of the marker to a marker linked to nucleic acid in a biological sample derived from a subject under moderate to high stringency <u>hybridization</u> ~~hybridisation~~ conditions and detecting the <u>hybridization</u> ~~hybridisation~~ using a detection means, wherein <u>hybridization</u> ~~hybridisation~~ of the probe to the sample nucleic acid indicates that the subject being tested is predisposed to or suffers from a bipolar affective disorder.

20.   **(Currently amended)** The method according to claim 4 wherein the marker is detected by <u>hybridizing</u> ~~hybridising~~ a nucleic acid probe or primer comprising the sequence of the marker to a nucleic acid that is linked to the marker in nucleic acid in a biological sample derived from a subject under moderate to high stringency <u>hybridization</u> ~~hybridisation~~ conditions and detecting the <u>hybridization</u> ~~hybridisation~~ by a detection means, wherein <u>hybridization</u> ~~hybridisation~~ of the probe to the sample nucleic acid indicates that the subject being tested is predisposed to or suffers from a bipolar affective disorder.

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21.   **(Currently amended)** The method according to claim 19 ~~or 20~~ wherein the detection means is a nucleic acid <u>hybridization</u> ~~hybridisation~~ reaction or a nucleic acid amplification reaction.

22.   **(Cancelled)**

23.   **(Cancelled)**

24.   **(Original)** The method according to claim 4 wherein the marker is detected by contacting a biological sample derived from the subject with an antibody capable of specifically binding to said marker for a time and under conditions sufficient for an antibody-ligand complex to form and then detecting the complex wherein detection of the complex indicates that the subject being tested is predisposed to or suffers from a bipolar affective disorder.

25.   **(Original)** The method according to claim 4 wherein the biological sample comprises a nucleated cell.

26.   **(Cancelled)**

27.   **(Cancelled)**

28.   **(Cancelled)**

29.   **(Cancelled)**

30.   **(Cancelled)**

31.   **(Cancelled)**

32.   **(Cancelled)**

33.   **(Cancelled)**

34.   **(Original)** A probe or primer comprising at least about 20 nucleotides that is capable of selectively hybridizing to the sequence set forth in SEQ ID NO: 1 and detecting a marker in a FAT gene that is associated with a bipolar affective disorder or a predisposition to a bipolar affective disorder.

35.   **(Cancelled)**

36.   **(Original)** A method for determining a subject that carries a gene or allele of a gene or a polymorphism that is associated with a bipolar affective disorder comprising detecting a marker within a FAT gene that is associated with a bipolar affective disorder in a sample derived from the subject, wherein detection of said marker indicates that the subject is a carrier of a gene or allele of a gene or a polymorphism is associated with a bipolar affective disorder.

37. **(Previously presented)** A method of treatment or prophylaxis of a bipolar affective disorder comprising:

(i) performing the method of claim 1 for determining a bipolar affective disorder or a predisposition to a bipolar affective disorder; and

(ii) administering or recommending a therapeutic for the treatment of bipolar affective disorder.

38. **(Original)** A method for identifying a marker that is associated with a bipolar affective disorder, said method comprising:

(i) identifying a polymorphism or allele within a FAT gene or an expression product thereof;

(ii) analyzing a panel of subjects to determine those that suffer from a bipolar affective disorder, wherein not all members of the panel comprise the polymorphism or allele; and

(iii) determining the variation in the development of a bipolar affective disorder wherein said variation indicates that the polymorphism or allele is associated with a subject's predisposition to a bipolar affective disorder.

39. **(Original)** A method for determining a candidate compound for the treatment of a bipolar affective disorder comprising:

(i) administering a candidate compound to an animal or cell comprising or expressing a marker within a FAT gene that is associated with a bipolar affective disorder and determining the level of FAT expression in said cell or animal;

(ii) administering a candidate compound to an animal or cell that does not comprise or express a marker within a FAT gene that is associated with a bipolar affective disorder and determining the level of FAT expression in said cell or animal; and

(iii) comparing the level of FAT expression at (i) and (ii),

wherein a decreased level of FAT expression at (i) relative to (ii) indicates that the compound is a candidate compound for the treatment of a bipolar affective disorder.

40. **(Original)** A method for determining a candidate compound for the treatment of a bipolar affective disorder comprising:

(i) administering a candidate compound to an animal or cell capable of expressing a FAT gene and determining the level of FAT expression in said cell or animal;

(ii) determining the level of FAT expression in an animal or cell capable of expressing a FAT gene in the absence of the candidate compound; and

(iii) comparing the level of FAT expression at (i) and (ii),

wherein a decreased level of FAT expression at (i) relative to (ii) indicates that the compound is a candidate compound for the treatment of a bipolar affective disorder.

41. **(Cancelled)**

42. **(Currently amended)** A process for identifying or determining a compound or modulator for the treatment of a bipolar affective disorder said method comprising:

(i) performing the method according to either claim 39 or 40 to thereby identify or determine a compound for the treatment of a bipolar affective disorder;

(ii) optionally, determining the structure of the compound;

(iii) optionally, providing the name or structure of the compound; and

(iv) providing the compound.

43. **(Currently amended)** A process of manufacturing a compound for the treatment of a bipolar affective disorder comprising:

(i) determining a candidate compound for the treatment of a bipolar affective disorder by performing the method according to either claim 39 or 40; and

(ii) using the compound in the manufacture of a therapeutic or prophylactic for the treatment of bipolar affective disorder.